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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

IMPINJ, INC.,

Plaintiff,

v.

NXP USA, INC.,

Defendant.

Case No. 4:19-cv-03161-YGR

IMPINJ, INC.'S OPPOSITION TO NXP USA, INC.'S MOTION FOR A NEW TRIAL AND FOR JUDGMENT AS A MATTER OF LAW

Hearing Date: September 5, 2023
Time: 2:00 p.m.
Location: Courtroom 1, 4th Floor
Judge: Hon. Yvonne Gonzalez Rogers

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I. INTRODUCTION

Defendant NXP USA ("NXP") seeks a new trial on the validity of the '302 patent based on the jury's inconsistent verdict. But the jury's verdict can be reconciled in Impinj's favor based on the Court's instructions and, in any event, NXP waived any objection by failing to object to the instructions and/or failing to object to the discharge of the jury. NXP also seeks judgment as a matter of law regarding infringement of the '597 patent, damages for NXP's sales of accused products delivered to AdvanIDe Americas, Inc. in Hong Kong, and Impinj's manufacturing capacity to make NXP's infringing sales for which the jury awarded lost profits. But the burden for overturning the jury's verdict on these issues is extremely high and, for the reasons explained below, the record contains more than sufficient evidence to support the jury's findings on each of the challenged grounds. In the alternative, NXP requests a new trial on these issues, but provides no justification for such requests. NXP's motion should be denied.

II. NXP'S MOTION SHOULD BE DENIED

A. There Is a High Threshold for Granting JMOL or a New Trial

"The trial court can overturn the jury and grant [a Rule 50 JMOL] motion only if … there is no legally sufficient basis for a reasonable jury to find for that party on that issue." *Winarto v. Toshiba Am. Elecs. Components*, *Inc*., 274 F.3d 1276, 1283 (9th Cir. 2001) (citations omitted). The trial court's role is limited:

> In ruling on a motion for JMOL, the court is not to make credibility determinations or weigh the evidence and should view all inferences in the light most favorable to the nonmoving party. The court must accept the jury's credibility findings consistent with the verdict. It must disregard all evidence favorable to the moving party that the jury is not required to believe. The court may not substitute its view of the evidence for that of the jury.

Winarto, 274 F.3d at 1283 (quotations omitted). "A court must uphold the jury's verdict if 'substantial evidence' supports the jury's conclusion." *Plexxikon Inc. v. Novartis Pharms. Corp*., 631 F. Supp. 3d 823, 832 (N.D. Cal. 2022) (citing *Castro v. Cty of L.A*., 833 F.3d 1060, 1066 (9th Cir. 2016)). Substantial evidence is "evidence adequate to support the jury's conclusion, even if it

is also possible to draw a contrary conclusion" from that same evidence. *Id*. (quotations omitted); *see also Smolen v. Chater*, 80 F.3d 1273, 1279 (9th Cir. 1996).

A new trial may only be granted under Rule 59 where "the verdict is contrary to the clear weight of the evidence, or is based upon evidence which is false, or to prevent, in the sound discretion of the trial court, a miscarriage of justice." *U.S. v. 4.0 Acres of Land*, 175 F.3d 1133, 1139 (9th Cir. 1999). A new trial is not permitted merely because the Court would itself have arrived at a different verdict. *4.0 Acres*, 175 F.3d at 1139. Instead, "the Ninth Circuit has held that the Court should grant the motion for new trial if, having given full respect to the jury's findings, the judge on the entire evidence is left with the definite and firm conviction that a mistake has been committed." *Newton v. Equilon Enters., LLC*, 411 F. Supp. 3d 856, 865 (N.D. Cal. 2019) (quotations omitted). "Where multiple theories could support the verdict, sufficient evidence as to any of one of them will defeat a motion for new trial." *Id*.

B. NXP Has Failed to Identify a Valid Justification for a New Trial Regarding Validity of the '302 Patent

As explained in Impinj's motion for JMOL (Dkt. 444), claims 1, 3, 4, and 7 of the '302 patent are valid over NXP's single obviousness ground as a matter of law. If the Court grants that motion, then NXP's motion is moot. *See Mycogen Plant Science v. Monsanto Co.,* 243 F.3d 1316, 1325-26 (Fed. Cir. 2001) (holding that granting of JMOL that resolved inconsistent verdict was proper). Even if the Court does not grant the motion, NXP's motion for a new trial should be denied because: (1) the jury's verdict can be reconciled in Impinj's favor; and (2) the verdict is a series of general verdicts that do not support a new trial and any inconsistency was waived.

1. The Jury's Verdict Can and Should Be Reconciled

The Court is obligated to try to reconcile the jury's verdict, including in light of its instructions:

> When faced with a claim that verdicts are inconsistent, the court ***must*** search for a reasonable way to read the verdicts as expressing a coherent view of the case, and must exhaust this effort before it is free to disregard the jury's verdict and remand the case for a new trial. The consistency of the jury verdicts must be considered in light of the judge's instructions to the jury.

Toner for Toner v. Lederle Labs., 828 F.2d 510, 512-513 (9th Cir. 1987) (citations omitted)[1] (harmonizing conflicting special verdicts based on jury instructions because "we must adhere to our duty to reconcile the jury verdicts if there is a reasonable way to do so"); *Vaughan v. Ricketts*, 950 F.2d 1464, 1470 (9th Cir. 1991) ("A court reviewing a judgment on allegedly inconsistent verdicts must uphold the judgment if it is possible to reconcile the verdicts on any reasonable theory consistent with the evidence[, and] … [t]he consistency of the verdicts 'must be considered in light of the judge's instructions to the jury.'") (citations omitted); *U.S. Football League v. Nat'l Football League*, 644 F. Supp. 1040, 1046 (S.D.N.Y. 1986), *aff'd,* 842 F.2d 1335 (2d Cir. 1988) (holding, in the context of general verdicts, "the Seventh Amendment imposes upon courts a constitutional obligation to search for an interpretation of the case which reconciles the verdicts"). Here, the verdict can be reconciled. The jury found that claims 1 and 3 of the '302 patent are valid over NXP's proposed obviousness combination of Eberhardt and Ching-San. While the jury also found dependent claims 4 and 7 invalid, those findings resulted from the juror's confusion about dependent claims in light of the Court's constructions. The Court can reconcile the jury's findings for claims 4 and 7 in favor of Impinj.

It is undisputed that the final jury instructions did not include an instruction on the difference between independent and dependent claims. As NXP concedes, the jury was at most instructed that obviousness requires consideration of "all requirements" of a claim. Dkt. 446 at 7 n.3. But the jury's confusion as to dependent claims is evident from its question as to whether it was required it "to evaluate the obviousness of each claim from other claims[.]" Dkt. 428 at 5 (jury note 2). In response, the Court answered that "[t]he obviousness of each claim is measured against the prior art. Each claim needs to be evaluated independently." *Id.* The jury followed that instruction and evaluated each claim "independently," and its reasoning is apparent from its questions and findings. Most importantly, it is clear that the jury rejected NXP's proposed

[1] All emphasis has been added, unless otherwise indicated.

obviousness combination but concluded that the additional limitations added by claims 4 and 7 were not independently obvious.

Claim 1 of the '302 patent recites a channel separating antenna contact pads, where the channel has flared ends that are substantially wider than the channel center. During trial, NXP and its expert, Dr. Subramanian, admitted that Eberhardt only discloses a straight channel. Tr. at 1017:22-1018:1. NXP, therefore, argued that a POSITA would be motivated to combine Eberhardt with Ching-San and, more specifically, would modify the straight channel of Eberhardt with the Ching-San bump shapes, such that the resulting channel would have flared ends. *Id.* at 1018:2-13, 1023:20-1024:8. Importantly, Impinj and its expert, Dr. Thompson, did not dispute the channel shape that would result if Dr. Subramanian's combination were accepted. Instead, Impinj and Dr Thompson argued that a POSITA would not be motivated to combine the teachings of Eberhardt and Ching-San because Eberhardt proposes an alternative to the flip-chip assembly of Ching-San and the '302 patent. *See generally* Dkt. 444 (Impinj's JMOL). By rejecting NXP's obviousness claim on claim 1, the jury necessarily rejected NXP's proposed combination.

The jury's findings on the other claims are consistent with its rejection of NXP's proposed combination and the Court's instructions. Specifically, the jury evaluated each dependent claim independently of claim 1 (pursuant to the Court's instruction) but still rejected NXP's proposed combination of Eberhardt and Ching-San. This is evident from the jury's question as to the meaning of "non-convex" in clam 3. The jury asked the Court to define non-convex and whether two parallel lines (as disclosed in Eberhardt alone) are considered non-convex. Dkt. 428 at 7. The Court responded that a non-convex shape is "[a] channel shape having its end widths that are wider than its center widths." *Id.* By asking whether two parallel lines are non-convex, the jury was necessarily evaluating claim 3 in view of Eberhardt alone, not in view of NXP's proposed combination. Had the jury accepted NXP's proposed combination of Eberhardt and Ching-San, the jury would not have needed to inquire about whether straight channels alone meet the non-convex limitation of claim 3. And because Eberhardt does not disclose a non-convex channel, the jury rejected NXP's obviousness defense.

Unlike claims 1 and 3, claims 4 and 7, which the jury found "invalid," do not explicitly recite a flared (i.e. a non-parallel) channel shape. Those claims, therefore, are met by Eberhardt alone if those claims are considered "independently" of claim 1. In particular, Eberhardt's straight channel is substantially symmetric (claim 4) and Eberhardt discloses a raised nonconductive structure and conductive layer (claim 7). Further, the jury heard testimony from Dr. Subramanian that claims 4 and 7 were not disputed by Impinj. Tr. at 1039:7-1040:19. Following the Court's instruction that each claim be evaluated independently, the jury reached the conclusion that claims 4 and 7 were invalid because Eberhardt could meet these limitations alone, and Impinj did not dispute these limitations.

But if the jury had been instructed that those claims *incorporate the limitations of independent claim 1*, and required channel ends substantially larger than the middle of the channel, it would have found them not proven invalid, just as it did with claims 1 and 3. Again, the jury's significant finding is that a POSITA would not be motivated to combine Eberhardt and Ching-San. The jury confirmed that it rejected this combination twice when it found claims 1 and 3 valid. The Court can reconcile the jury's verdict by similarly holding claims 4 and 7 valid. *E.g.*, *Intermatic Inc. v. Lamson & Sessions Co.*, 273 F.3d 1355, 1368-69 (Fed. Cir. 2001), *rev'd on other grounds* 537 U.S. 1016 (2002) (resolving the jury's inconsistent verdict on obviousness between independent and dependent claims in favor of the patentee because the jury's answers "overwhelmingly indicate" that the prior art did not disclose a limitation required by the independent claims and, therefore, the dependent claims).

2. The Verdict Was a General Verdict That Does Not Support a New Trial and is Subject to Waiver

Even if the Court determines that the jury's verdict cannot be reconciled, it should not grant a new trial. To support its request for a new trial, NXP argues that: (1) the Ninth Circuit only finds waiver in "limited circumstances;" and (2) entering judgment on the jury's verdict would be plain error. NXP is wrong.

In *Zhang v. American Gem Seafoods*, the Ninth Circuit held that "in a general verdict the jury announces only the prevailing party on a particular claim, and may announce damages." 339

F.3d 1020, 1031 (9th Cir. 2003). In contrast, "special verdicts and interrogatories comprise only factual findings[.]" *Id.* In the verdict form here, the jury was asked a series of pure questions of law—whether each asserted claim of the '302 patent is invalid as obvious. The jury was not asked to return a verdict on any factual findings. Under *Zhang*, the jury's verdict is a series of general verdicts. 339 F.3d at 1031; *see also Function Media, L.L.C. v. Google, Inc.*, 708 F.3d 1310, 1329-30 (Fed. Cir. 2013) (finding verdict form asking whether specific claims were anticipated, obvious and infringed is a series of general verdicts).[2]

Zhang held that "we could not grant a new trial based on legally irreconcilable general verdicts." 339 F.3d at 1035. More specifically, the court explained that it "found no Supreme Court or Ninth Circuit cases in which an appellate court has directed the trial court to grant a new trial due to inconsistencies between general verdicts, and Ninth Circuit precedent dictates that [the Ninth Circuit] cannot do so." *Id*. Indeed, the court was "confident that this rule is historically sound and remains the majority rule." *Id.* The same reasoning applies here. The jury's verdict is a series of general verdicts. In such cases, even if they are inconsistent, they do not warrant a new trial.

Further, the inconsistency in the instant case arises directly from the jury instructions, and any objections to the verdict were waived by NXP because it failed to object to the instructions. As *Zhang* instructed, "[t]he potential for a legally irreconcilable verdict should be addressed through jury instructions properly proposed under Rule 51." *Id.* at 1037. Under Rule 51, "instructional errors are waived if not raised in a timely fashion." *Id*During the parties' charging conference, NXP did not object to the final jury instructions pertaining to obviousness. NXP, therefore, waived its right to request a new trial to remedy the jury's inconsistent verdict.

Similarly, "[w]hen counsel is invited to consider whether or not to discharge the jury, counsel risks waiver of objections to any inconsistencies in the jury's findings if counsel does not

[2] NXP relies on *Duhn Oil Tool*, *Inc. v. Cooper Cameron Corp.*, which held that such a verdict is somewhere between a general verdict and a special verdict and that the inconsistency was irreconcilable. 818 F. Supp. 2d 1193, 1218-1221 (E.D.Cal. 2011). Not only is *Duhn* not binding, but it was before the Federal Circuit's holding in *Function Media* that such a verdict is a series of *general* verdicts.

raise the issue before the jury is excused." *Home Indem. Co. v. Lane Powell Moss & Miller*, 43 F.3d 1322, 1331 (9th Cir. 1995); *Battle v. District of Columbia*, 105 F. Supp. 3d 69, 71 (D.C.C. 2015) ("[T]he consensus view appears to be that a party waives any objection to inconsistent general verdicts by failing to timely object") (footnote and citations omitted). Here, after polling the jury, the Court did not ask if the jury could be discharged. But the Court did ask the parties if there was anything else the parties needed from the Court. Tr. at 1434:22-25. At this time, it would have been appropriate for NXP to object to the jury's inconsistent verdict so that it could preserve its request for a new trial. *See L&W, Inc. v. Shertech, Inc.*, 471 F.3d 1311, 1319 (Fed. Cir. 2006) (finding counsel could have objected to the verdict's inconsistency when asked if counsel needed the record to reflect anything else). But NXP chose not to do so. "[T]he waiver rule promotes judicial efficiency by requiring that the trial court be given a chance to let the original jury resolve any inconsistency in its responses." *Id.* NXP did not object to the jury's inconsistent verdict until its request for a new trial. Its failure to timely object should result in waiver. *See Pierce v. Southern Pacific Transp. Co.*, 823 F.2d 1366, 1370 (9th Cir. 1987) (stating that the waiver rule applies to general verdicts under Fed. R. Civ. P. 49(b)); *Function Media*, 708 F.3d at 1330 ("While it may seem harsh, requiring objections to be made before the jury is dismissed is the only way to efficiently cure potential inconsistencies when there is not a detailed special verdict to review.").

Finally, NXP argues that entering the verdict is reviewable because entry of judgment as it stands would be plain error. Dkt. 446 at 10. But NXP does not cite any Ninth Circuit precedent that recognizes this exception to waiver.[3] As the Federal Circuit held in *L&W*, the plain error exception to waiver must be based on precedent from the relevant circuit. 471 F.3d at 1318-1319 (rejecting defendant's argument of a "plain error" exception to waiver).

[3] The Tenth Circuit's decision in *Johnson v. Ablt Trucking, Inc.*, is also distinguishable. There the court recognized that "a party waives the right to object to inconsistencies in a general verdict with special interrogatories if it has not objected on that ground before the jury is discharged 'unless the verdict is inconsistent on its face such that the entry of judgment upon the verdict is plain error.'" 412 F.3d 1138, 1141 (10th Cir. 2005). The court found there was no waiver, however, because the jury verdict was a *special* verdict, not a *general* verdict as in the instant case. *Id.* at 1142. Regardless, the quote is dicta because the court held the jury verdict was reconcilable.

C. NXP Has Failed to Meet the High Burden of Showing that the Record Lacks Substantial Evidence From Which the Jury Could Find Infringement of the '597 Patent

NXP argues that it is entitled to JMOL of noninfringement of the '597 patent,[4] asserting that Impinj failed to offer "*any* evidence" that the UCODE 8 and 9 accused products include the limitations of a "stage" and single "charge-accumulating path." Mot. at 19. This is incorrect: the evidence at trial was more than sufficient to support the jury's infringement findings.

1. Substantial Evidence Supports the Jury's Finding that the Accused Products Include a "Stage," as Construed

NXP raises two arguments regarding the "stage" limitations. First, NXP asserts that the accused products' charge pump cells, which it calls "the actual stages," do not include all claimed elements. *E.g.*, Mot. at 10, 13. Second, NXP (*id.* at 10) asserts that Impinj "failed to identify a stepped up DC voltage output" in the accused products' stage. Neither argument has merit.

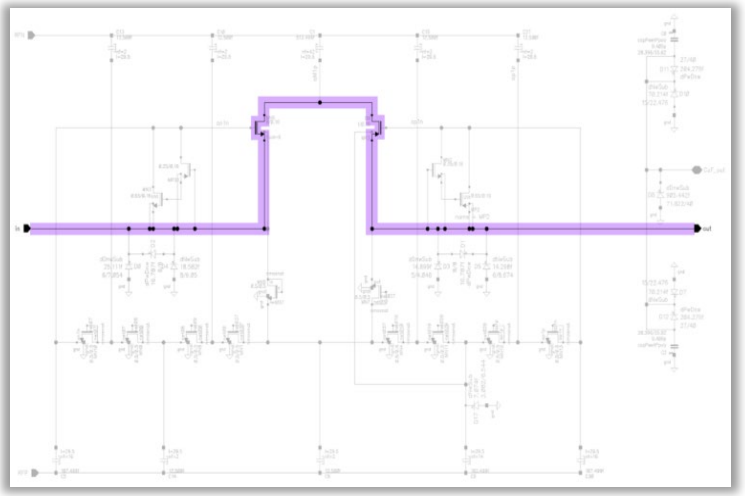
a. The Record Contains Substantial Evidence that the Accused Products Include a "Stage" with Two Synchronous Elements

The Court construed "stage" as "a unit of circuit components that steps up a DC voltage to its output during a single RF cycle." Dkt. 410 at 3.[5] The Court expressly ruled "that 'boxes' on a schematic are not dispositive" of whether a unit of circuit components is a "stage." *Id.*

[4] NXP also purports to seek a new trial on the issue of noninfringement (Mot. at 10) but fails to provide substantive analysis supporting that request. "While the substantial evidence test under Rule 50 and the clear weight of evidence standard under Rule 59 have some analytical affinity, they are separate inquiries[.]" *Johnstech Int'l Corp. v. JF Microtechnology SDN BHD*, 315 F. Supp. 3d 1130, 1138 (N.D. Cal. 2018), aff'd, 773 F. App'x 623 (Fed. Cir. 2019). NXP's new trial request should be denied due to NXP's failure to substantively address it or, at a minimum, denied for the same reasons that compel denial of its JMOL request. *See id.* (denying motion for new trial where defendant "simply recites the standard for a new trial and slaps that on its Rule 50 arguments … [and] does not say a word substantively about the application of Rule 59[.]").

[5] The Court issued this claim construction after plaintiff's case-in-chief had closed. Impinj offered to put in additional evidence of infringement under the Court's new construction on rebuttal, but was precluded from doing so. *E.g.*, Tr. 1129:11-1130:22, 939:2-940:7. Courts in this District have recognized that excluding evidence of infringement under a mid-trial claim construction "deprive[s] the jury of a fair basis for deciding the infringement issue" and "allow[s] prejudicial error to creep into the trial process such that substantial justice was not done." *Avago Techs. Gen. IP PTE Ltd. v. Elan Microelectronics Corp.*, No. C 04-05385 JW, 2009 WL 8612367, at *4 (N.D.Cal. Sept. 23, 2009) (finding that plaintiffs were "deprived … of being able to prepare and

The accused rectifier circuit is made up of multiple serially-connected charge pump cell circuits, which NXP's schematics label as "id_uc8_pmp14." Tr. 517:24-518:5; Tr. 558:7-11; Ex. 597.5, 597.6. At trial, Dr. Greg Durgin testified that each cell includes two serially-connected switching transistors that are switched by the RF signal and form part of the charge-accumulating path, as well as various bias circuitry. Tr. 519:9-19 ("I've highlighted the paths that are important. This purple path is that main charge-accumulating path. It goes through switching transistors and on to the next segment or cell. … These [switching transistors] are turning on and off coordinating that flow of charge through the path."); Tr. 519:24-520:11 (identifying bias circuitry); Ex. 597.6 (above right, annotations added; charge-accumulating path shown in purple). Dr. Durgin testified that a unit of circuit components in adjacent cells—specifically, the second switching transistor of a first cell, both switching transistors of a second cell, and the first switching transistor of a third cell—are the claimed "stage." Tr. 521:5-16, 521:24-522:2 ("Q. So inside each of these yellow squares, what is inside each of those? A. Each yellow square has two synchronous elements that look exactly like the green squares on the left."), 554:11-18 ("… [A] Stage one (indicating) is here. Q. So that's the second half of that first box, the entirety of the second box, and … the first half of [the] third box? A. Yes. …"); Ex. 597.5, 6 (excerpted below, annotations added; stages shown in yellow dashed-line boxes and synchronous elements shown in green dashed-line boxes):



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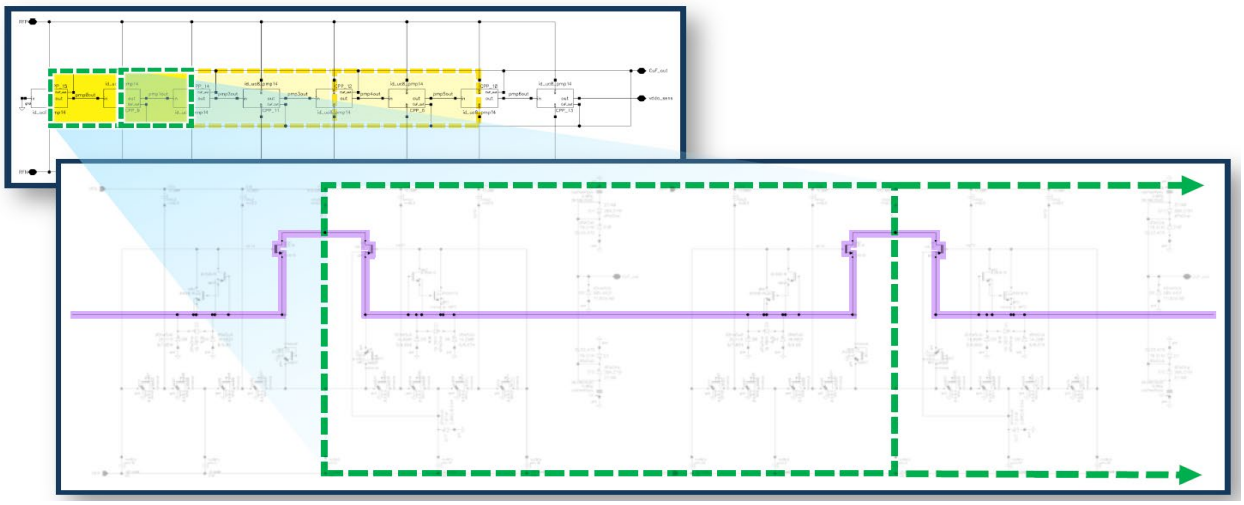
submit evidence consistent with the Court's construction" where construction was issued after plaintiffs presented their evidence and defendant then argued that plaintiff's pre-construction evidence failed to prove that the accused products practiced the newly-construed limitation). The very most NXP could ask for on this issue would thus be a new trial, to allow the jury to consider *all* evidence under the Court's new construction. Because the record contains more than substantial evidence to support the infringement verdict, however, NXP's motion fails on the merits.



He testified that the first stage starts in the middle of the first cell because that marks the beginning of a set of components that repeats multiple times. Tr. 522:6-9, 527:20-25.

Dr. Durgin testified that the four switching transistors of a stage work together to step up DC voltage during a single RF cycle: during the first phase of the RF signal, the first pair of transistors is on and stepping up charge, and the second pair of transistors is off; and during the second phase of the RF signal, the second pair of transistors is on and stepping up charge and the first pair is off. Tr. 522:10-523:21; *id.* 1129:2-10 (amount of DC voltage on nodes of charge-accumulating path "build[s] higher and higher" as "the path moves through each individual transistor"). Because transistor pairs are turned on and off with the RF signal "in tandem, … the charge flows along the charge-accumulating path." Tr. 523:12-14; *id.* 594:5-9 (charge-accumulating path "draws up the voltage-accumulating charge until it gets to a DC output that can be used to power the rest of circuit"). Dr. Durgin specifically showed that the first and second transistor pairs of the stage, which are switched on/off together during the same phase of the RF signal, qualify respectively as the first and second "synchronous elements" that at least one stage must include. Tr. 528:21-529:12, 529:24-530:19, 531:9-532:15. He further testified that the accused products include a "plurality of stages" connected in series, as the claims also require. Tr. 527:12-19 ("The stages are these yellow boxes. And there's more than one of them. … [A]s you can see, they're connected in series."), 521:17-23 (identifying "two additional stages that are coupled in series to make one large charge-accumulating path"), 554:1-5, 527:12-17. The record

thus contains substantial evidence from which the jury was entitled to (and did) find that the accused circuits include a "stage," as the Court construed that term.

NXP does not dispute that the four-transistor stage Dr. Durgin identified includes the two "synchronous elements" recited by the claims. *See* Mot. at 11-13. Instead, NXP argues (*id*. at 12-13) that a *different* set of components—the components within a charge pump cell—does not. But this is irrelevant to the question at hand, which is whether there was substantial evidence for the jury to find that *what Dr. Durgin relied upon* was, in fact, the "stage" of the '597 patent claims. Whether some other unit of components was also a stage (or was not) has no bearing on that determination. NXP's position is essentially that the boxes drawn on a schematic should control what can be considered a "unit" or stage in its products—but that is directly contrary to the Court's instruction "that 'boxes' on a schematic are not dispositive." Dkt. 410 at 3; *accord* Tr. 589:4-9 ("There are no boxes [in an actual circuit]. Those are there just for convenience to understand this huge schematic that we're dealing with. They don't exist on the actual circuit.").

NXP next asserts (Mot. at 13) that the four-transistor stages identified by Dr. Durgin are "not units," but merely "ad hoc collections of circuit components." To the extent NXP is attempting to further construe the Court's construction, this is untimely. It is also unsupported: NXP cites nothing in the specification that provides a narrow definition of "unit"; Dr. Durgin and Mr. Oliver both confirmed that this plain-English term has no specialized technological meaning (Tr. 509:7-10, 587:4-8, 366:9-15); and the common meaning of "unit" is simply a "functional constituent of a whole" or "group regarded as a distinct entity within a larger group." *See* Delacenserie Decl., Ex. A. More substantively, Dr. Durgin testified that the four transistors of each accused stage work together as a "unit" during an RF cycle:

> The construction that the Court adopted … reflects the knowledge of a person of ordinary skill in the art, and it's -- there has to be full cycle rectification, which requires, in this case, a pair of each switching transistor. Each switching transistor – a ***pair of switching transistors operates on half RF cycle***. So if the device has to operate on a full RF cycle, ***you need two pairs of those switching transistor units***.

Tr. 1150:17-24; *id*. 522:10-523:21, 1129:2-10, 594:5-9; *accord* Dkt. 410 at 3 (noting "Inventor Oliver's testimony … that a stage is the structure which includes transistors and which is repeated for the purpose of developing the voltage"), Tr. 365:22-366:6 ("… [T]here's a structure and there's a stack of transistors. The voltage is developed along the stack and the stack of transistors may have a lot of transistors in it. …"). The record thus contains substantial evidence from which the jury could have found that Dr. Durgin's four-transistor unit satisfied the Court's construction of "stage." *E.g.*, *Finjan*, *Inc. v. Sophos*, *Inc*., 244 F. Supp. 3d 1016, 1050 (N.D. Cal. 2017) (denying JMOL where, although "[t]he parties have different interpretations of what [claim] terms require," plaintiff's "interpretations are plausible and the jury reasonably could have adopted them").

b. The Record Contains Substantial Evidence that Each "Stage" Steps Up a DC Voltage to its Output

NXP also argues that the four-transistor stage identified by Dr. Durgin "do[es] not end with a stepped up DC output," because, NXP alleges, the "RFP and RFN signals at the top and bottom of the [UCODE 8/9] chip are 'antenna connections,'" not "DC outputs with a stepped up voltage." Motion at 14, 16. The jury rejected this argument, and the record contains substantial evidence that supports its finding that the accused stages satisfy the Court's construction.

NXP mischaracterizes both the Court's construction and Dr. Durgin's testimony. NXP implies (*e.g.*, Mot. at 14-15) that a "stage" must provide the final DC voltage that powers the entire circuit. Not so: the construction requires a "unit of circuit components that steps up a DC voltage to *its* output," *i.e.*, to *the unit's* output. Dkt. 410 at 3. And Dr. Durgin testified the accused stages do exactly this. He testified that the sole charge-accumulating path runs through the accused products' switching transistors that form the sequential four-transistor stages. Tr. 519:9-23, 520:12-24. The charge-accumulating path is "the path that is *converting RF to DC* and *raising charge up to an output voltage* that would *later* drive the chip." Tr. 512:17-22; Tr. 594:5-9 (charge-accumulating path "draws up the voltage-accumulating charge"). The switching transistors in the charge-accumulating path "convert[] RF to DC and *rais[e] charge up to an output voltage*" by pulling charge from right to left through each pair of transistors, when that pair switches on. Tr.

522:10-523:14 ("… Charge is pulled up through this first transistor and deposited on this very large capacitor here … Then in time, we get to … the downward phase [of the RF signal]. … And now charge -- so if I represent that with little pluses -- is drug across the pathway … Both switches are -- are opened in tandem and the charge flows along the charge-accumulating path."). The voltage at the output of each stage—*i.e.*, at the output node of the fourth transistor—is thus greater than at the stage input. Tr. 1129:8-10 (total DC voltage increases each time path moves through a transistor). Enough charge is accumulated along the path that, when it eventually connects to the final power supply output, the charge drives the entire IC. Tr. 519:3-8 (stages are "pumping up all that charge to [the final output] in order to drive the rest of the circuit").

Dr. Durgin expressly stated that *all* "points on the circuits that [he] identified" as comprising a stage "have DC inputs and outputs on them." Tr. 1149:17-19. Indeed, he testified, a rectifier *would not work* unless each node on the charge-accumulating path has a DC component:

> Q. How would the operation of a rectifier … and particularly its charge-accumulating path be different if the voltage on each one of its nodes did not have some DC component?
>
> A. ***It wouldn't work***. If you didn't have DC charge on rectifier -- on the capacitor, the rectifier would not be working. It would not be accumulating charge.
>
> Q. And if you traced your way along a rectifier's charge-accumulating path, ***what is happening to the DC voltage on successive nodes in that path***?
>
> A. It's building up. Each input is connected to the output, and then the DC voltage gets higher on each succ[e]ssive output of each succ[e]ssive stage. That's how the rectifier works.
>
> Q. What happens to the total amount of the DC voltage every time the path moves through each individual transistor?
>
> A. It should build higher and higher.

Tr. 1128:20-1129:10; Tr. 1130:24-1131:4 ("There will ***always be a DC component on those charge-accumulating path points***; otherwise, it's not working as a rectifier.").

NXP characterizes Dr. Durgin's testimony as "speculation." Mot. at 15. To the contrary, it is evidence of what a POSITA understands to be the necessary operation of *every* operational

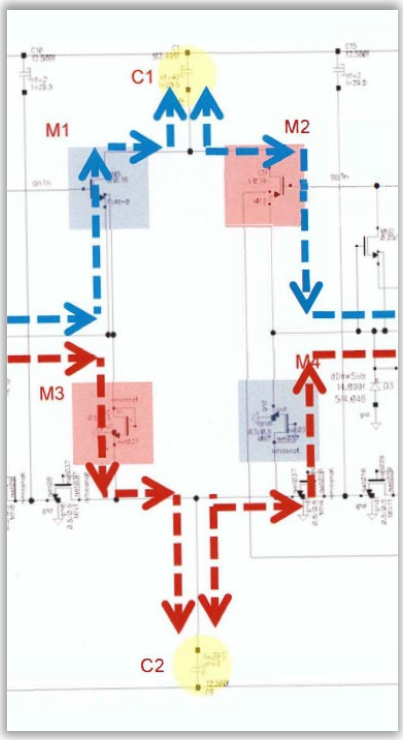
voltage rectifier. The jury was entitled to credit this evidence over NXP's testimony. *E.g.*, *MobileMedia Ideas LLC v. Apple Inc.*, 780 F.3d 1159, 1168 (Fed. Cir. 2015) ("when there is conflicting testimony at trial, and the evidence overall does not make only one finding on the point reasonable, the jury is permitted to make credibility determinations and believe the witness it considers more trustworthy"). This is substantially different from the case NXP cites (Mot. at 15), where the issue was whether plaintiff had shown that an accused encoder "had actually run." *Lucent Techs. Inc. v. Gateway, Inc.*, 543 F.3d 710, 723 (Fed. Cir. 2008). There, plaintiff's expert testified about certain error scenarios that would result in the accused encoder running, but the *Lucent* court determined that the expert "did not know at what rates such errors occurred and did not ever observe such errors." *Id*. Here, there is no allegation that Dr. Durgin is unfamiliar with the standard operation of rectifiers—an undisputedly common circuit (*see* Tr. 394:16-22)—and no consensus that his principles are unsound. Rather, Dr. Diorio and Mr. Oliver both confirmed that in rectifiers, voltage is *continually stepped up* at each node along the charge-accumulating path. *E.g.*, Tr. 261:15-19 ("The rectifier takes that little itty-bitty alternating wave and -- and amplifies it and moves charge to the right, keeps *amplifying and growing and growing and growing* due to the switching function of that small signal, and produces a DC voltage output"), 358:6-9 (switching transistors are "where the charge *accumulates*, flows, gets passed to the next stage, *accumulates*, flows. And eventually, that charge path leads to the output."), 366:1-3 ("there's a stack of transistors" and "[t]he voltage is developed along the stack").

NXP also asserts, citing testimony from Mr. Amtmann, that the "the capacitor at the top of the circuit that Dr. Durgin identified [as being connected to the stage's output] has 'AC voltage, alternating current,' not DC voltage." Mot. at 14. But as Dr. Durgin testified, this node's voltage must *also have a DC component*—otherwise, the accused products' rectifier would not work. Tr. 1130:24-1131:4. As Dr. Durgin told the jury, "[i]t's not uncommon to have a DC and an AC voltage at the same node." Tr. 1128:4-5. In fact, NXP's expert Dr. van der Weide admitted that the voltage at a node connected to an RF signal through a capacitor—the *exact configuration* of Dr. Durgin's cited output node—was "a DC voltage." Tr. 899:15-900:10, 1127:10-1128:2. The

record thus contains ample evidence from which the jury was entitled to resolve this factual dispute in favor of Impinj. *E.g.*, *Johnstech Int'l*, 315 F. Supp. 3d at 1136 (noting that "[t]he jury properly resolved the factual dispute, and the existence of some evidence possibly favorable to [defendant] in an otherwise disputed record does not call the verdict into question").

2. Substantial Evidence Supports the Jury's Finding that the Accused Products Include a Single Charge-Accumulating Path

The '597 patent claims require that there be "no charge accumulating path between the first beginning and the first ending [of the first/second synchronous element] other than the first path." Ex. 1, col.11:20-22, 36-38. At trial, it was undisputed that the accused rectifier has "one main path" along which charge accumulates: the path flowing from left-to-right through the switching transistors that Dr. Durgin identified. Amtmann Dep. 102:18-103:7 (attached to July 7, 2023 Tr.); Ex. 1335 (excerpted at right; charge-accumulating path shown in blue); Tr. 519:9-19, 534:20-24 ("Q. This blue path, how does that correspond to what you've talked about earlier today? A. So that is clearly the main charge-accumulating path that we've been talking about. And it goes through those power switching transistors M1 and M2."); Ex. 597.6. Dr. van der Weide then opined that the accused products have additional charge-accumulating paths running from left-to-right, due to leakage current that allegedly flowed *down* through the lower transistor he marked as M3 and up through what he marked as M4. Tr. 524:7-23; Ex. 1335; Mot. at 17 (citing same alleged paths through M3/M4).



The jury, however, was presented with substantial evidence that any leakage through transistors M3/M4 must flow in the ***opposite*** direction from what Dr. van der Weide alleged—*against* the direction of charge accumulation—and is thus not a "charge-accumulating path." Dr. Durgin and Mr. Amtmann testified that the lower M3/M4 transistors are part of the accused

products' bias circuitry. Tr. 519:24-520:7 ("… So all of those other transistors are what we would call bias circuitry. Again, they're just using little bits of current, usually flowing in the opposite direction to the charge-accumulating path."), 524:25-535:6, 535:18-536:1; Amtmann Dep. 104:16-17 ("this leaking [sic] path is used for biasing the main transistors"). Bias circuitry is commonly included in rectifiers to help the switching transistors operate more efficiently. Tr. 520:9-11, 545:19-546:19, 365:10-17. Dr. Durgin explained, and Dr. van der Weide admitted, that the M3/M4 bias transistors are "not switched" by the RF signal but are instead "diode-connected." Tr. 576:21-23, 1132:3-14, 853:20-854:7. Dr. Durgin and Dr. van der Weide also agreed that diode-connected transistors can only conduct current when they are "forward-biased," which occurs when the voltage at their input is higher than the voltage at their output. Tr. 1133:7-21, 903:4-10, 576:21-25. However, Dr. Durgin testified, the voltage at the *output* of each accused charge pump cell is higher than the voltage at the input. Tr. 1134:5-8 ("the voltage is higher on this side near the output of the charge -- rectifier circuit where the voltage gets stepped up than it is on the left side where you have the starting voltage in the circuit"). Dr. van der Weide conceded this, as well. Tr. 1194:4-12. The diode-connected M3/M4 bias transistors are thus *reverse* biased, not forward biased, and conduct current only from right-to-left, "in the opposite direction of charge accumulation":

> Q. And given that these transistors that Dr. van der Weide identified are not forward biased, was Dr. van der Weide correct that the charge is going to flow from left to right in the bottom half of this UCODE circuit?
>
> A. No, it is ***flowing in the opposite direction***. … It will take energy away from the circuit and return it in the ***opposite direction of charge accumulation***.

Tr. 1134:9-18; *id*. at 1133:22-1134:2 ("[M3 and M4] are reversed biased so that they're always leaking on both cycles of the RF from -- right to left"), 1136:14-22 ("All of the transistors are carrying charge in the bottom half of that circuit from right to left"), 576:21-577:10 ("[T]here's only a little bit of what we've been referring to as leakage current moving in the opposite direction of what [] Professor van der Weide has shown"), 538:23-539:5 ("Q. Dr. Durgin, given the connectivity of transistor M3, where does the leakage current actually flow within UCODE? A.

When the RF is on in this circuit, the leakage will be a small amount of current in the opposite direction that Professor van der Weide has shown in his report."), 536:5-8 ("[I]t's a very small trickle of current that's used to bias the devices. It's ***flowing opposite the direction of the charge-accumulating path***, and it's not going from stage to stage."), 577:22-578:7, 578:13-25.

Mr. Oliver also confirmed, based on a teardown he analyzed, that leakage in the accused bias circuitry flows in the direction opposite to what Dr. van der Weide asserted. Tr. 371:7-19 ("[W]e also know, by the way that they are connected, that … ***charge is*** going this -- is ***going right to left***"), 423:25-424:6, 367:13-369:13; Ex. 11. He testified that this is standard bias circuitry operation and that current flows the "wrong way" through Monza R6's bias circuitry, as it does in the accused products. Tr. 363:10-18 ("Q. Does [Monza R6 bias circuitry] create a second charge-accumulating path? A. It can't accumulate. It goes the wrong way. … those charge pumps are counteracting, they're counter productive to the charge accumulation. You might call it charge leakage or charge depletion or some kind of way of diminishing the charge rather than accumulating the charge."), 359:12-16.

The record thus contains substantial evidence from which the jury was entitled to reject Dr. van der Weide's theory that the accused rectifiers have additional charge-accumulating paths through transistors M3/M4. NXP's Motion does not address any of the above-cited evidence. Instead, NXP implies first (Mot. at 17) that Dr. Durgin's testimony was merely that "[POSITAs] don't consider leakage paths to be doing any charge accumulation" and thus improper claim construction. NXP's context-less quote misrepresents the testimony: Dr. Durgin testified that "leakage paths are not charge-accumulating paths. At least *this particular one* [i.e., through M3/M4] certainly isn't." Tr. 548:25-549:2. More fundamentally, Dr. Durgin's much larger point—shown by the extensive citations above (*supra* at 15-17)—was that to the extent leakage current is flowing through transistors M3/M4, it is in the *opposite direction* from Dr. van der Weide's theory. NXP also asserts (Mot. at 8) that Mr. Oliver's testimony was limited to an assertion that the bias circuitry paths were "small and inefficient," which NXP calls "irrelevant." Again, NXP ignores Mr. Oliver's extensive testimony (*supra* at 17) that bias circuitry carries current in the opposite

direction of charge accumulation. The transistors' relative size confirms this point: as Mr. Oliver testified, the charge-accumulating path includes large switching transistors able to handle significant charge, while the much-smaller bias transistors carry only a small charge "going the *wrong* direction … counteracting charge accumulation." Tr. 372:23-373:9; Tr. 371:7-19 ("… You wouldn't use these to accumulate charge. But we also know, by the way that they are connected, that … charge is going this -- is going right to left.").

Finally, NXP implies (Mot. at 8) that the extensive testimony showing that the bias circuitry carries charge in the opposite direction of charge accumulation is contrary to statements in Impinj's POPR. But as Dr. Durgin testified, the rectifiers of the accused products and '597 patent are structured differently from Mandal. Mandal's rectifier has two symmetrical charge-accumulating paths running in parallel and, given this configuration, leakage from one of Mandal's paths is swept back to the input and travels through the charge-accumulating path. Tr. 1121:24-1122:3 ("Q. What is the difference between Mandal's circuit and that of the '597 patent claims? A. So the Mandal on the right is a symmetrical combination of four transistor elements, and it has charge-accumulating paths running with both branches in parallel."), 1125:8-1126:1, 1152:11-17 ("Q. And when leakage flows counterclockwise in [Mandal's rectifier switching] cell, where does it get swept into? A. It gets swept back to the input at a lower potential. Q. And from there where does that charge go? A. … It then goes through the main charge-accumulating path and is elevated back up to the output voltage."). The accused products' rectifier, in contrast, is a *single*-path rectifier—and the leakage identified by Dr. van der Weide thus flows through bias circuitry from right-to-left, not through a charge-accumulating path. Tr. 1152:18-21 ("Q. And how is the configuration, the shape of Mandal's cell different from the shape of '597 patent claims? A. The '597 claims are always in a line because there's just one charge-accumulating path, just like the UCODE 8 products."), 1122:16-20 ("there are always multiple charge-accumulating paths in the Mandal. And both the '597 and the UCODE products have one single path"); *supra* at 15-17 (citing record). The record contains substantial evidence to support the jury's finding that the accused products satisfy the "charge-accumulating path" limitations.

D. There Was Substantial Evidence from Which the Jury Could Award Damages for Sales of Accused Products Delivered to AdvanIDe Americas in Hong Kong

NXP also argues that it is entitled to JMOL that Impinj may not recover damages for its sales of accused products to AdvanIDe Americas, Inc. ("AdvanIDe Americas") that were delivered to Hong Kong, asserting that "there was ***not a shred of evidence*** that ***any*** of the sales activities related to products shipped to AdvanIDe [Americas] in Hong Kong occurred in the U.S." Mot. at 20. This, too, is wrong: the evidence at trial was more than sufficient to support the jury's finding that "a substantial portion of activities of the sales transactions for NXP USA's sales to AdvanIDe Americas, Inc. that are shipped to Hong Kong occurred within the United States." *Id*. (citing Dkt. 426 at 5).

NXP does not dispute that when it delivers accused products to AdvanIDe Americas in the United States, the sales of such products occur within the United States. Tr. at 729:1-731:12. In other words, NXP concedes that "a substantial portion of activities of th[ose] sales transaction[s] must have occurred within the United States." Dkt. 427 at 5. The ***only*** difference between those sales and the sales NXP challenges is the location to which the accused products were delivered. But this is just one of many non-dispositive facts the jury was instructed to consider when determining the location of a sale:

> For a sale to be considered within the United States such that it infringes the asserted patents, a substantial portion of activities of the sales transaction must have occurred within the United States, which may include negotiations, contracting, transfer of title, shipment, and delivery. There is no single, universally applicable fact that determines the location of a sale.

Dkt. 427 at 5; *see, e.g.*, *Carnegie Mellon Univ. v. Marvell Tech. Grp. Ltd.*, 807 F.3d 1283, 1308 (Fed. Cir. 2015) ("The standards for determining where a sale may be said to occur do not pinpoint a single, universally applicable fact that determines the answer, and it is not even settled whether a sale can have more than one location."); *MediaTek Inc. v. Freescale Semiconductor, Inc.*, No. 11-cv-5341-YGR, 2014 WL 580836, at *2-3 (N.D. Cal. Feb. 13, 2014) ("The cases considering whether a sale or offer of sale occurred for purposes of section 271 look to a number of different

factors…"). NXP did not object to this instruction, nor does it cite case law that holds the location of delivery is, by itself, sufficient to transform a sale that is otherwise considered within the United States into a sale outside the United States. *See* Tr. at 667:18-668:15. The fact that certain activities common to ***all*** of NXP's sales transactions occurred outside the United States (e.g., processing of purchase orders and manufacturing) is thus irrelevant. *See* Mot. at 22. Locations of "AdvanIDe's CEO and NXP's account manager" are similarly irrelevant to determining where certain sales to AdvanIDe Americas occurred because they are the same for all such sales. *Id*. NXP's admission that all accused products it delivered to customers, including to AdvanIDe Americas, in the United States were sold within the United States is therefore sufficient to support the jury's finding that the same is true for accused products NXP delivered to AdvanIDe Americas in Hong Kong.

The jury's finding is also supported by evidence that AdvanIDe Americas is based and interacts with NXP, at least primarily, in the United States. For example, Impinj not only "sought to establish," but rather presented evidence and elicited testimony sufficient to establish, "that AdvanIDe Americas, Inc. is based in the U.S., has offices in the U.S., and [is] 'only franchised to operate in the Americas region.'" Mot. at 21; *e.g.*, Tr. (Kodritsch) at 1068:23–1069:3 ("Q. You understand that [AdvanIDe Americas] is based in the United States, correct? A. As the name implicates, yes."), 1070:6–10 ("Q. So you have no idea where [AdvanIDe America's offices] are? A. I have no idea where those offices are ***in the U.S.***"), 1070:21–1071:9 (confirming that "the distributor region for AdvanIDe Americas, Inc. for all these sales is AMR for America or Americas") (referring to Ex. 419), 1072:6–14 ("Q. So [AdvanIDe] Americas, Inc. is only franchised to operate in the Americas region, correct? A. That's my understanding."); Ex. 534 (identifying "USA" as the "Ship To Country" for a portion of NXP USA's sales to AdvanIDe Americas); Rajen Dep. at 208-231 (played at Tr. at 723:17). Moreover, NXP ***USA*** is responsible for all sales to AdvanIDe ***Americas*** (regardless of whether the "ship to" location is USA or Hong Kong), while NXP's foreign affiliate is responsible for all sales to foreign AdvanIDe entities (none of which indicate USA as the "ship to" location). Ex. 534. Based on NXP's allocation of sales responsibilities between U.S.-based and foreign entities, it was entirely reasonable for the jury to

reject NXP's attempts to conflate these entities[6] and instead conclude that a substantial portion of the activities associated with all sales to AdvanIDe Americas occurred within the United States.

The jury was also presented with evidence that the accused products delivered to AdvanIDe Americas in Hong Kong (or at least some of these products) are ultimately distributed in the United States. For example, Mr. Rajen and Mr. Kodritsch both testified that AdvanIDe Americas is a distributor of the accused products and "only franchised to operate in the Americas region." Tr. (Kodritsch) at 1060:11–22, 1071:6–9 (referring to Ex. 419), 1072:6–14; Rajen Dep. at 208–213 (played at Tr. at 723:17). And the data NXP collects from its distributors confirms that AdvanIDe Americas distributed a significant portion of the accused products to customers in the United States.[7] Ex. 419; *see also* Rajen Dep. at 232 (played at Tr. at 723:17).

NXP's assertion that this is "irrelevant to whether NXP's sales to AdvanIDe themselves constitute a 'sale' within the United States" because "Impinj is proceeding exclusively on a direct infringement theory" not only misstates the law, but directly contradicts the jury instruction it agreed to. Mot. at 21. At trial, NXP never objected to instructing the jury that "if a product is made and delivered outside the United States, and never reaches the domestic United States, there is a presumption that the product was not sold within the United States." Dkt. 427 at 5; *see* Tr. at 667:18–668:15. The instruction makes clear that the presumption only applies for products that

[6] For example, NXP emphasizes Mr. Kodritsch's testimony that NXP has "an account manager for AdvanIDe … located in Singapore" and that "AdvanIDe['s] CEO is also located in Singapore." Tr. at 1060:11–22, 1070:11–16. However, contrary to NXP's insinuations, Mr. Kodritsch never specifically addressed AdvenIDe ***Americas***; not once did he use the term "AdvanIDe Americas" or otherwise indicate which AdvanIDe entity he was referring to. This is important because, as he admitted, "NXP sells to multiple AdvanIDe entities," including AdvanIDe Holdings PTE LTD to which NXP Semiconductor Netherlands BV delivers accused products in Singapore. *Id*. at 1068:21–22; Ex. 534. It was therefore well-within the jury's discretion to disregard Mr. Kodritsch's testimony as irrelevant in connection with NXP USA's sales to AdvanIDe Americas.

[7] The jury could have also reasonably inferred that accused products AdvanIDe Americas distributed outside the United States (e.g., in other countries within "the Americas") ultimately reach the United States given its share of the RAIN RFID market and the fact that there are often multiple steps in the supply chain between NXP, distributors, and end customers. *E.g.*, Tr. at 232:19-233:8, 1061:25-1062:8.

never "reach" the United States. Based on the evidence, that jury could have found that the products delivered to AdvenIDe Americas in Hong Kong do reach the United States, and therefore no presumption applies. To the extent NXP disagrees with the instruction, it waived the objection by failing to object. Fed. R. Civ. P. 51(c); Tr. at 667:18–668:15. Regardless, courts have held that whether accused products "ultimately reach the United States market and compete domestically with the rights of the patent holder" is not only relevant to the location of sale, but often a key distinction between sales that may be considered made within versus outside the United States. *Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013) (granting summary judgment of no liability "with respect to products shipped to customers located outside the United States and which never reach the domestic United States market" but finding that "there remains a genuine issue of material fact as to whether accused products manufactured and delivered abroad but imported into the United States market by downstream customers (e.g. the hard drive manufacturers and original equipment manufacturers that install hard drives before importing them) constitute an infringing sale under § 271(a)."); *Carnegie Mellon*, 807 F.3d at 1288 ("We conclude that the royalty properly embraces those Marvell-sold chips that, though made and delivered abroad, were imported into the United States."), 1305-06 ("[W]e see no problem with [ ] applying the royalty rate to chips that do enter the United States. But there is a potential problem with including the chips made and delivered abroad, and never imported into the United States, unless those chips can fairly be said to have been sold here."). Accordingly, the jury was not required to presume that accused products delivered to AdvanIDe Americas in Hong Kong were not sold within the United States. And even if it did, the record contains evidence sufficient to support the jury's finding that the presumption had been overcome and that all of NXP USA's sales to AdvanIDe Americas were made within the United States.

E. There Was Substantial Evidence from Which the Jury Could Find that Impinj Would Have Had Sufficient Manufacturing Capability to Make Additional Sales

NXP's assertion that it is entitled to JMOL on Impinj's request for lost profits "[b]ecause Impinj failed to offer evidence that it had the manufacturing capability to exploit demand throughout the damages period" is based on an erroneous application of the law. The test for lost profits is premised on a hypothetical "but for" world in which infringement did not occur. *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1545 (Fed. Cir. 1995). "To recover lost profits damages, the patentee must show a reasonable probability that, 'but for' the infringement, it would have made the sales that were made by the infringer," including a reasonable probability that it would have had the manufacturing capability to make such sales. *Id*. NXP's argument focuses exclusively on evidence regarding the manufacturing capacity Impinj ***actually had*** during the damages period, and ignores the substantial evidence that Impinj ***would have had*** significantly greater manufacturing capacity absent NXP's infringement.

More specifically, NXP's argument hinges on its assertion that "Impinj could not meet its own customers' demand" at points throughout this period and an alleged rule that "[w]here a plaintiff does not 'possess[] the means and facilities requisite for supply the demands of its own customers and of those who purchased the infringing' products, there is 'no adequate basis for an assessment of damages upon the grounds of lost sales.'" Mot. at 23 (citing *Dowagiac Mfg. Co. v. Minnesota Moline Plow Co.*, 235 U.S. 641, 648 (1915)). *Dowagiac* established no such rule, nor has such a rule been established in the hundred-plus years since. The Supreme Court's decision in *Dowagiac* was based on its finding that "[d]uring the period of infringement several other munufacturers [sic] were selling drills in large numbers in the same localities in direct competition with the plaintiff's drill, and under the evidence it could not be said that, if the sales in question had not been made, the defendants' customers would have bought from the plaintiff rather than from the other manufacturers." 235 U.S. at 648. The opinion noted that, "[b]esides, it did not satisfactorily appear that the plaintiff possessed the means and facilities requisite for supplying the demands of its own customers," but this was not the basis for the decision, as NXP implies. *Id*.

To be clear, Impinj does not contend that a patent owner's actual manufacturing capacity (or lack thereof) during the damages period is irrelevant. However, there is evidence that the supply shortages Impinj experienced in this case were caused by NXP's infringement, and it was entirely reasonable for the jury to conclude that such shortages would not have occurred—and Impinj therefore would have had sufficient manufacturing capability to make 57% of NXP's accused product sales—absent the infringement. As Dr. Diorio explained:

> TSMC gives an allocation of chips every year. And your allocation is based significantly on your history and the amount of chips you took in the prior year. So they didn't lose capacity when we went into the semiconductor shortfall. What happened was demand went up, and so they increased their capacity to the extent they were able.
>
> Because NXP had decreased our market share and decreased the number of chips that we were selling, and actually our market share fell. Or said another way, our growth wasn't the same as the markets. TSMC didn't give us the same preference as I believe they would have given us if we had held market share.
>
> They based our -- for example, our 2022 allocation on what we did in 2021, 2021 on what we did in 2020. So we had shortfall in the 2022 timeframe and in the latter part of 2021. But we would have had more wafers at that time if we hadn't lost share in the 2018 and 2019 timeframe.

Tr. at 272:12–273:3. This was echoed by Mr. Dossett and considered in Ms. Kindler's analysis. *E.g.*, Tr. at 634:3–21, 749:13–750:11. The jury also saw evidence of, and heard testimony about, Impinj's finished goods inventory throughout the damages period, which Ms. Kindler opined "further supports [Impinj's] ability to meet th[e] increased demand if NXP could not sell UCODE 88 [sic] and 9." Tr. at 750:12–24; Dannels Dep. at 89–87 (played at Tr. at 635:20); Ex. 224.

Further, the number of sales at issue are miniscule compared to Impinj's actual sales. As the jury heard, the market shares of Impinj and NXP as a whole (i.e., all NXP entities, collectively) were "about equal" over the damages period, but "most of those sales that [NXP made] are outside the U.S. by foreign affiliates." Tr. at 141:3–9, 1106:20–1108:6; Exs. 534, 535, 1327. Indeed, NXP's sales data confirms that the accused sales at issue in this case (i.e., only those made by NXP USA) were roughly ten percent of NXP's overall sales, and also that NXP's customers had a strong

preference for the accused UCODE 8 and 9 products over UCODE 7. Ex. 534; *see also* Tr. at 1071:14–24. There is more than sufficient evidence supporting the jury's finding that Impinj could have made a mere 5% additional sales relative to the sales it actually made during the damages period.[8]

III. CONCLUSION

For the reasons discussed above, NXP's motion should be denied.

[8] That "Impinj declined to call any TSMC witnesses or introduce any TSMC documents" has no bearing on whether the testimony of multiple Impinj witnesses, Impinj documents, and opinions of an independent expert provide a legally sufficient basis for the jury's finding that Impinj would have had adequate manufacturing capability to satisfy additional demand if NXP had not infringed. *E.g.*, *Winarto*, 274 F.3d at 1283 ("[A JMOL] motion should be granted only if 'there is no legally sufficient basis for a reasonable jury to find for that party on that issue.' … '[T]he court must accept the jury's credibility findings consistent with the verdict." (citations omitted)).

Respectfully submitted:

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the above and foregoing document has been served via U.S. District Court CM/ECF notification on August 11, 2023 to all counsel of record.

/s/ Ramsey M. Al-Salam
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